

Fall Protection Policy

Summary

This policy has been designed for protection measures compatible with typical work that US BT employees, Siemens controlled contractors, and Siemens controlled subcontractors perform. OSHA recognizes that accidents involving falls are generally complex events frequently involving a variety of factors. Consequently, the standard for fall protection deals with both the human and equipment related issues in protecting workers from fall hazards. US BT as a responsible employer and its employees must do the following:

- Where protection is required (OSHA 29 CFR 1926.501 – “Duty to Have Fall Protection”), select fall protection systems appropriate for given situations.
- Use proper construction and installation of safety systems.
- Supervise employees properly.
- Use safe work procedures.
- Train workers in the proper selection, use, and maintenance of fall protection systems.
- **It is the policy of US BT that only retractable fall protection lanyards may be used as part of the fall protection system.**

1.1 Workplace Assessment and Fall Protection System Selection

It is critical to understand that any elevated surface of six (6) feet or greater (including building roofs, platforms, scaffolds, etc.) or four (4) feet or greater in general industry settings that lacks an approved guardrail or parapet of 39 inches will require the implementation of a fall protection system, including properly rated tie-off points. When such tie-off points are not present, a barricaded perimeter should be established at 15 feet from the leading unprotected edge of the surface. All employees working on such barricaded surfaces must be instructed not to cross the demarcated boundary, and a “spotter” must ensure compliance with this requirement. Remember, if no 39-inch guardrail or parapet, and if no rated fall protection tie-off points, then no closer than 15 feet.

Supervision is required to assess the workplace to determine if the walking or working surfaces have the strength and structural integrity to safely support US BT personnel. Employees are not permitted to work on walking or working surfaces until a responsible supervisor has determined that the surfaces have the requisite strength and structural integrity to support them safely.

Once this has been determined and the surface is safe to work on, select a fall protection option for the particular work application if a fall hazard is present. A reasonable effort must be made to anticipate the particular hazards to

which the working employee(s) may be exposed in the course of the job.

It is critical that we communicate and coordinate with customers, other contractors (particularly at multi-employer worksites), and suppliers to ensure US BT employees and other workers are safe.

1.2 Fall Protection Needs of Particular Walking and Working Surfaces

The OSHA Fall Protection rule contains 15 requirements setting forth the options from which you may choose to protect employees when exposed to fall hazards. For the typical type of work that US BT performs, the requirements are listed below. We are required to choose and use a fall protection system (or combination of systems) which address the fall protection needs of particular job sites.

Below are listed some of the typical exposures our employees may come in contact with pertaining to the fall protection regulation.

1.2.1 Unprotected Sides and Edges

Employees must be protected when exposed to falls from unprotected sides and edges of walking/working surfaces (horizontal and vertical surfaces) which are six feet or more above the floor or lower levels. The options from which you can choose to provide this protection are:

- Guardrail systems
- Safety net systems

- Personal fall arrest systems

OSHA considers these three types of systems to be “conventional fall protection systems.” Whatever system you use, OSHA expects you to implement it early in the construction process and to maintain that system in place until the permanent elements of the structure which will eliminate the exposure to falling hazards are in place or until the work is completed.

OSHA has determined that there is no safe-distance from an unprotected side or edge that would render fall protection unnecessary. However, OSHA “Letters of Interpretation” set an allowable distance of 15 feet from the unprotected side or edge, as long as this distance is clearly demarcated and enforced.

OSHA considers a fall protection measure to be unfeasible only when the employer establishes that application of that measure is either functionally unworkable or would prevent the performance of required work. They recognize that there are situations where one or another safety measure cannot be implemented, because of the configuration of the worksite or due to circumstances during a particular phase of the construction process. If in the course of determining feasibility, fall protection is found to be not feasible, functionally unworkable, or would prevent the performance of required work, consult with US BT EH&S Management before starting the particular task associated.

1.2.2 Hoist Areas

Each employee in a hoist area must be protected from falling six (6) feet or more. Your choices for this protection are:

- Guardrail systems
- Personal fall arrest systems

If guardrail systems (or chain) or portions thereof must be removed to facilitate hoisting operations, as during the landing of materials, and a worker must lean through the access opening or out over the edge of the access opening to receive or guide equipment and materials, that employee must be protected by a personal fall arrest system.

1.2.3 Holes

Employees may be injured or killed if they step into holes, trip over holes, fall through holes, or are hit by objects falling through holes.

Employees on walking/working surfaces must be protected from:

- Falling into or through holes (including skylight openings) six (6) or more feet above lower levels by covers over the holes, erecting a guardrail system around the holes, or by the use of a personal fall arrest system
- Tripping in or stepping into or through holes (including skylights) by covers
- Objects falling through holes (including skylights) by covers

OSHA does not intend that a guardrail be erected around holes while employees are working at the hole, passing materials, etc. Therefore, if the cover is removed while work is in progress, guardrails are not required because they would interfere with the performance of work. When the work has been completed, the employer will be required to either replace the cover or erect guardrails around the hole.

Ramps, runways, and other walkways must be equipped with guardrails when employees are subject to falling six (6) feet or more to lower levels, four (4) feet in general industry settings.

1.2.4 Excavations

Although US BT does not typically do excavations, occasionally we may do trenching. If the trench is six (6) feet or more deep, guardrails, fences, or barricades must be present.

1.2.5 Dangerous Equipment

Employees must be protected when working six (6) feet or more above equipment by guardrails, personal fall arrest systems, or safety nets.

When working less than six (6) feet above hazards, either guardrails or equipment guards that shield the hazard must be used.

1.2.6 Roofing Work on Low-Slope Roofs

Anyone engaged in roofing activities on low-slope roofs with unprotected sides and edges six (6) feet or more

above lower levels must be protected from falling by using either guardrail systems, safety nets, or personal fall arrest systems. Also a combination of warning lines, guardrails, safety nets, personal fall arrest systems, and safety monitoring systems may be used. On roofs 50 feet or less in width, only a safety monitoring system may be used.

1.2.7 Steep Roofs

Workers must be protected from falling when working on roofs with slopes greater than 4 in 12 (vertical to horizontal), when the roof has unprotected sides or edges more than six (6) feet above lower levels. Roof jacks may not be used as a substitute for fall protection. Fall protection consists of guardrail systems with toe-boards, personal fall arrest systems, or safety net systems.

1.2.8 Residential Construction

BT occasionally may do residential work and must protect workers from falls of six (6) feet or more by using either guardrail systems, safety net systems, or personal fall arrest systems.

If it can be demonstrated that it is not feasible or creates a greater hazard to implement these systems, a fall protection plan that meets the requirements of 29 CFR 1926.502 (k) must be developed and implemented. If in the course of determining feasibility, fall protection is found to be not feasible, functionally unworkable, or would prevent the performance of required work, consult with US BT EH&S Management before starting the particular task associated.

1.2.9 Wall Openings

Employees who are exposed to falling out or through wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is six (6) feet or more above lower levels and the inside bottom edge of the wall is less than 39 inches above the walking/working surface, must be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.

Wall openings are defined as openings 30 inches or more high and 18 inches or more wide, which have a bottom edge to lower level fall distance of six (6) feet or more on the side away from the employee and a bottom edge to walking/working surface height of less than 39 inches on the side facing the employee.

1.2.10 Protection from Falling Objects

When employees are exposed to falling objects, hard hats must be worn and one of the following measures must be implemented.

- Erect toe boards, screens, or guardrail systems to prevent objects from falling from higher levels.
- Erect a canopy structure and keep potential falling objects far enough from the edge of the higher level so that these objects will not go over the edge if they are accidentally moved.
- Barricade the area to which objects could fall by prohibiting workers from entering the barricaded area, and keep objects that may fall far enough away from

the edge of a higher level so that these objects will not go over the edge if they are accidentally moved.

1.3 Fall Protection Systems Criteria and Practices

1.3.1 Storage and General Use

- All equipment must be stored in a clean, dry place that is free from abrasive or cutting materials and excessive heat.
- Never store the personal fall arrest equipment in the bottom of a tool box, on the ground, or outside exposed to the elements (i.e., sun, rain, snow, etc.).
- Hang equipment in a cool, dry location in a way that retains its shape.
- Always follow manufacturer recommendations for inspection.
- Clean according to manufacturer recommendations, typically with a mild, nonabrasive soap, and hang to dry.
- Never dry using heat or sun exposure or use strong detergents in cleaning.
- Never store equipment near excessive heat, chemicals, moisture, or sunlight.
- Never store in an area with exposures to fumes or corrosives elements.
- Avoid dirt and build-up on equipment.
- Never use this equipment for any purpose other than personal fall arrest.

- Once exposed to a fall, remove equipment from service immediately.

NOTE: Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service. Package and send the connectors, lanyard, and body harness to the SII Sr. EH&S Manager.

The system will not be used again until it is inspected and determined by a competent person to be undamaged and suitable for reuse.